

M. P. NAYAR*: Notes on Asian Melastomataceae (4)**

New species and notes on the genus

Anerinckleistus Korth.

M. P. ナヤール: アジア産ノボタン科植物考察 (4)

Anerinckleistus 属の新種及びノート

Korthals (1840-44) founded the genus *Anerinckleistus* on the basis of *Anerinckleistus hirsutus* from G. Malintang, Sumatra. Naudin (1851) and Miquel (1855) accepted Korthals generic concept of *Anerinckleistus*. Nayar (1976) reduced Ridley's genus *Phaulanthus* to the synonymy of *Anerinckleistus* and delimited the genus *Anerinckleistus* on the basis of the nature of stamen and inflorescence and shape of the capsule.

Nayar (1978) indicated the salient generic characters of *Anerinckleistus* Korth. and *Hylocharis* Miq. on the basis of the nature of inflorescence and stamens. The genus *Anerinckleistus* has fasciculate or pseudoumbellate inflorescence with equal or subequal stamens; whereas the genus *Hylocharis* has paniculate inflorescence with very unequal stamens. The following new additions and new combinations are proposed for the genus *Anerinckleistus*.

1) *Anerinckleistus hispidissimus* (Ridley) Nayar, comb. nov.*Blastus hispidissimus* Ridley in Kew Bull. 1946: 33 (1946).

Distribution: Borneo.

Hab. Borneo: Sarawak, Hose in 1894 (holotype K, isotype BM); Mt. Dulit, near Kong Kapa, alt. 300 m., Richards 1930 (K); Sabah, Balikpapan Dist., Sg. Mentawir region, Kostermans 9791 (K). Indonesian Borneo: W. Koetai, No. 24, L. Iboet, alt. 130-160 m., Endert 2660 (K, L); Sembodja Balikpapan, Sauveur K. 18 (K, L).

In the type description Ridley (l.c.) mentioned the number of stamens as four. On scrutiny it is seen, there are eight stamens. The nature of inflorescence, stamens and calyx-tube warrant the transfer of this taxon to the genus *Anerinckleistus*.

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** Continued from Journ. Jap. Bot. 55: 45-52, 1980.

2) ***Anerinacleistus clemensii*** Nayar, sp. nov.

Frutex ca. 2-3 m altus. Rami teretiusculi, juniores dense appresse pilosi, setis 1.5-2 mm longis, velutinis. Folia ovata vel ovato-elliptica, 10-19 cm × 4.5-8 cm, basi cuneata, apice acuminata, margine integra, supra in sicco viridio-brunnea, subtus in sicco pallide brunnea, supra glabra, sed in nervis principalibus setosa, subtus velutina, inter nervos pilosa, ad nervos dense pilosa, 5-nervia, venulis transversis supra distinctis, subtus venulis transversis prominentibus, parallelis, numerosis; petiolus 0.8-2.4 cm longus, dense pilosus. Inflorescentia axillaris, pseudo-umbellata et fasciculata, dense pilosa, setis 2-3 mm longis; pedunculus 7-10 mm longus, robustus, dense setosus; pedicellus 2-2.5 mm longus, dense setosus. Calycis tubus campanulatus, 2.5-3 mm longus, setis 3-3.5 mm longis dense obtectus, dentibus subulatis 1-1.5 mm longis. Petala 4, lanceolato-subulata, 2.5-3 mm × 1.5 mm, apice subulata. Stamina 8, subaequalia, filamentis 2-2.5 mm longis, antheris subulato-rostratis, 3-3.2 mm longis, connectivo basi inappendiculato. Stylus filiformis, 5-6 mm longus, glaber, stigmatibus punctiformi. Capsula subglobosa, 3 mm × 2.5 mm, dense setosa. Semina minuta.

Distribution: Endemic to Borneo.

Hab. Borneo: Sarawak, Gat, Upper Rejang river, J. & M. S. Clemens 21573 (holotype K, isotype BM); Mt. Matang, alt. 500 m., J. & M. S. Clemens 20940 (K, BM).

This species is closely allied to *Anerinacleistus griffithii* Hook. f., but differs in having glabrous upper leaf surface and shorter petiole (0.8-2.4 mm long). In *A. griffithii* both surfaces of leaf are densely velutinous tomentose and petiole very much longer (5-12 cm long). Besides in *A. clemensii* the leaf base is cuneate and of the five main nerves, two arise a little above base; whereas in *A. griffithii* the leaf base is rounded and all the five main nerves arise from the base of the leaf.

3) ***Anerinacleistus clemensii*** Nayar var. ***penibukanensis*** Nayar, var. nov.

Frutex. Rami teretes, juniores dense appresse pilosi. Folia sessilia, ovato-elliptica, 10-15.5 cm × 4.5-6 cm, basi breviter bi-auriculata, apice acuto-acuminata, supra in sicco atro-brunnea, subtus in sicco violaceo-brunnea, supra juniora sparse puberula, subtus velutina, inter nervos pilosa, ad nervos dense velutino-pilosa, 5-nervia, venulis transversalibus subtus prominentibus, parallelis, numerosis, venulis transversis supra distinctis. Inflorescentia axillaris, fasciculata, dense pilosa. Calycis tubus campanulatus 2.5 mm longus, setis 3-3.5 mm longis

dense obtectus, dentibus subulatis 1 mm longis.

Distribution: Endemic to Borneo.

Hab. Borneo: Sabah, Penibukan, alt. 1333-1666 m., J. & M. S. Clemens 30495 (holotype K, isotype L).

This taxon is quite characteristic in having sessile and briefly auriculate leaves and dark violet tomentum on the undersurface of leaves; whereas in the type the leaves are petiolate with cuneate base and the tomentum on the undersurface of the leaves is brownish. Since there is variation in the length of the petiole, it is proposed to consider this taxon as a variety.

4) *Anerincleistus fasciculatus* Nayar, sp. nov.

Frutex ca. 2 m altus. Rami adulti teretes, juveniles subteretes vel compressiusculi, dense appresse setosi. Folia ovato-elliptica, 15-21 cm × 6-9.5 cm, basi obtusa, apice acuminata supra in sicco viridia, subtus in sicco pallida, supra glabra, subtus inter nervos puberula, ad nervos dense pilosa, 5-7 nervia, supra venulis transversis distinctis, subtus venulis transversis prominentibus distinctis, reticulatis; petiolus 3.5-5.5 cm longus, dense appresse setosus. Inflorescentia axillaris, fasciculata, dense setosa, setis 3-4 mm longis. Calycis tubus campanulatus 2 mm longus, dense setosus, dentes 4 triangulares 1 mm longi producti. Petala et stamina ignota. Capsula subglobosa 2.5-3 mm × 2.5 mm, dense setosa. Semina minutissima cuneata, numerosa.

Distribution: Sarawak in Borneo.

Hab. Borneo: Sarawak, Kapit, Upper Rejang river, J. & M. S. Clemens 21145 (holotype K); Gat, Upper Rejang river, J. & M. S. Clemens 21583 (K).

This species is allied to *Anerincleistus clemensii* Nayar, but differs in having puberulous lower surface of leaves and fascicled setose inflorescence in the axils of leaves; whereas in *A. clemensii*, the undersurface of leaves is velvety tomentose and inflorescence is pseudoumbellate.

5) *Anerincleistus macranthus* King in J. As. Soc. Beng. 69(2): 15 (1900); Ridl. Fl. Mal. Pen. 1: 776 (1922).

Distribution: Malaya.

Hab. Malaya: Perak, Scortechini s. n. (lectotype K); Gunong Batu Puteh, Wray Jr. 1621 (K, CAL); Pahang, Gunong Berumban, Ridley 13547 (K, CAL); Cameroon Highlands, Jamaat 27032 (K).

A. macranthus is allied to *A. hirsutus* Korth. of Sumatra which is the type species of the genus *Anerincleistus*, but differs in having glabrate undersurface

of leaf, larger calyx tube, calyx lobes and stamens.

6) **Anerincleistus hirsutus** Korthals in Temminck, Verhand. Nat. Gesch. Bot. 250, t. 68 (1840-1844); Blume in Mus. Bot. Lugd.-Bat. 1(1), 13 (1849); Naudin in Ann. Sc. Nat. ser. 3, 15: 306 (1851); Miquel, Fl. Ned. Ind. 1: 555 (1855); Triana in Trans. Linn. Soc. 28: 75, t. 6 (1871); Cogniaux in DC., Monogr. Phanerog. 7: 478 (1891); Krasser in Engl. & Prantl, Pflanzenf. 3, 7: 177 (1893); Bakhuizen f. in Meded. Bot. Mus. & Herb. Rijks. Univ. Utrecht 91: 294 (1943).

Distribution: Sumatra.

Hab. Sumatra: G. Malintang, Korthals s.n. (holotype L, isotype K); Tandai Benkoelen, Brooks 7177 (K).

As mentioned by Ridley (1922), this species is allied to *A. macranthus* King which is endemic to Malaya and *A. pauciflorus* Ridley, occurring in Malaya and Sarawak.

7) **Anerincleistus vestitus** Nayar, sp. nov.

Herba perennis. Rami teretiusculi, appresse setulosi. Folia obovata vel obovato-oblonga, 8-12 cm × 4-6 cm, basi cuneata et breviter subcordata, apice obtusa et rotunda, margine integra, supra dense velutino-pilosa, subtus in nervis adpresse dense setuloso-pilosa, inter nervos minute pilosa, 5-nervia, venulis transversis distinctis; petiolus 1-2.5 cm longus, teretiusculus, setulosus. Inflorescentia terminalis vel axillaris, pseudo-umbellata, dense appresse setulosa; pedicellus 1.5-2.5 mm longus. Calycis tubus campanulatus, 2 mm longus, dense setosus, dentibus triangularibus 1.8 mm longis producti. Petala ovato-lanceolata, 3 mm × 1.5-1.8 mm, apice acuminata. Stamina 8 subaequalia, filamentis 2.5-3 mm longis, antheris subulatis 2.5-3 mm longis, connectivo basi inappendiculato. Stylus filiformis, 7-8 mm longus, stigmatibus punctiformi. Capsula subglobosa 2.5-3 mm × 2.5 mm, 8-costata, dense setosa. Semina minuta, 0.2 mm longa.

Distribution: Endemic to Borneo.

Hab. Borneo: Sarawak, Ulu Lemanak, Bukit Bangai, alt. 333 m., S. Colenette 852 (holotype K); Ibid., alt. 400 m., S. Colenette 863 (K).

This species is allied to *Anerincleistus montanus* Nayar, but differs in the nature of pubescence in the upper surface of leaves and in the length of the calyx lobes. According to Colenette's field data (Colenette 852), the species has pale pink flowers and brilliant violet anthers.

8) **Anerincleistus montanus** Nayar, sp. nov.

Herba perennis. Rami appresse setulosi. Folia obovata vel elliptico-obovata, 8-15 cm \times 3-5.5 cm, basi breviter auriculata, apice obtusa vel breviter acuminata, margine integra, supra minute puberula et glabrata, subtus ad nervos dense appresse setulosa, inter nervos sparse puberula, 5-nervia, nervulis transversalibus parallelis, subtus valde conspicuis, subcoriacea; petiolus 3-7 mm longus, dense setulosus. Inflorescentia axillaris 3-5 flora, umbellata, 3.5-6 cm longa, dense setosa; pedunculus 3-4.5 cm longus, dense setulosus; bractee ovato-lanceolatae, 3.5-4 mm longae, dense setosae; pedicellus 3.5 mm longus, dense setosus. Calycis tubus 2-5 mm longus, 2 mm latus, dense setosus; setis 2-2.5 mm longis, dentibus 4 triangularibus 0.5-0.8 mm longis producti. Petala 4, ovata, 2.5-2.8 \times 2-2.2 mm, apice attenuato-acuminata. Stamina 8, subaequalia, filamentis 1.8-2 mm longis, antheris subulatis 2.5-3 mm longis, antheris in sicco violaceis, connectivo basi inappendiculato. Stylus 5-6 mm longus, glaber, stigmatibus punctiformi.

Distribution: Endemic to Borneo.

Hab. Borneo: Sarawak, Gunong Apeng, 2nd Div., alt. 966 m., S. Collenette 725 (holotype K); Gunong Balapau, Ulu Tinjar, alt. 600 m., P. W. Richards 2389 (K, L).

A. montanus is closely allied to *A. vestitus* in the nature of flowers and stamens. However in *A. vestitus* the upper surface of leaves are densely velutino-tomentose, the inflorescence is many flowered (20-25 flowers) and the calyx lobes are prominently lobed (1.8 mm long); whereas in *A. montanus*, the upper surface of leaf is puberulous or glabrate, the inflorescence is few-flowered (3-5 flowers) and the calyx lobes are shortly lobed (0.5-0.8 mm long).

9) ***Anerincleistus pubinervosus*** Nayar, sp. nov.

Herbae subcaules, 5-12 cm altae. Rami dense setosi. Folia subsessilia, obovata, 6-13.5 cm \times 4-7 cm, basi cuneata et breviter subauriculata, apice obtusa vel subrotunda, supra inter nervos sparsissime scabrida, in nervis ciliata, subtus inter nervos glabrata, in nervis appresse tomentosa, 7-nervia, subtus venulis transversis distinctis. Inflorescentia terminalis, pseudo-umbellata; pedunculus 5-7 cm longus. Calycis tubus campanulatus 4-4.5 mm longus, dense appresse setulosus; limbus 4-dentatus, dentibus 4 triangularibus 0.8 mm longis. Petala ovata 3.5 mm longa, 2.5-3 mm lata, apice acuminata. Stamina 8, filamentis 2.5-3 mm longis, antheris lanceolato-subulatis, 3.5-4 mm longis, connectivo basi inappendiculato. Stylus 6 mm longus, filiformis, stigmatibus punctiformi. Capsula, campanulata, 3.5-4 mm longa, quadrangularis, 8-costata, setulosa.

Distribution: Endemic to Borneo.

Hab. Borneo: Sarawak, Teneong, Div. 3, alt. 633 m., W. M. A. Brooke 9179 (holotype BM, isotype L).

This species is allied to *A. vestitus* in the nature of its habit and in the shape of the leaves, but differs in having sessile leaves, puberulous upper surface of leaves and shorter calyx lobes (0.8 mm long); whereas in *A. vestitus*, the leaves are prominently petiolate, upper surface of leaves densely pilose and the calyx lobes are longer (1.8 mm long).

10) ***Anerinleistus barbatus*** Nayar, sp. nov.

Frutex. Rami teretiusculi, juniores dense appresse pilosi, setis 0.8–1 mm longis. Folia ovato-elliptica, 7–12 cm × 3–6 cm, apice acuminata, basi cuneata, margine integra, supra sparse setulosa, supra in nervis principalibus, dense setosa, subtus inter nervos pilosa, ad nervos dense pilosa, 7-nervia, venulis transversis supra et subtus distinctis, parallelis, numerosis, membranacea; petiolus 1–3.5 cm longus, dense pilosus. Inflorescentia axillaris, pseudo-umbellata, 1.5–2 cm longa, dense setosa; pedunculus 9–13 cm longus, dense pilosus; pedicellus 1.5–2.5 mm longus. Calycis tubus campanulatus, 4–4.5 mm longus, dense setosus, setis 3–3.5 mm longis, barbatis. Petala 4, parva, ovato-lanceolata, 2.5 mm × 1.2 mm. Stamina 8, subaequalia, filamentis 1 mm longis, antheris subulato-lanceolatis 1.5 mm longis, connectivo dorso calcarato. Ovarium calycis tubo septis 8 adnatum, loculi 8. Stylus filiformis, glaber, 2–2.5 mm longus, stigmatibus punctiformi. Fructus capsularis 5–5.5 mm × 3.5–4.5 mm, 8-costatus, dense pilosus et barbatus.

Distribution: Sumatra.

Hab. Sumatra: W. Coast, E. of Lubuk Sikaping, Mt. Gadang, West side, alt. c. 1000 m, J. V. Borssum W. 2057 (holotype L).

A. barbatus is allied to *A. clemensii*, occurring in Borneo, but differs in having 7-nerved leaves, larger calyx tube with densely barbate hairs; whereas in *A. clemensii*, the leaves are 5-nerved and the calyx tube is smaller with setose (non barbate) hairs.

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マレー半島・マレー諸島に分布するノボタン科の *Anerincleistus* 属について、属の限界を明かにし、6 新種、1 新変種を記載し、1 新組合せを発表し、その他の種についても検討を行った。

○秩父山中地溝帯から木生シダの化石産出 (西田治文・田中邦幸) Harufumi NISHIDA & Kuniyuki TANAKA: A new locality of *Cyathocaulis nakdongensis* Ogura.

本州中部から紀伊半島、四国へと連なる四万十層群の下部白亜系からは和歌山県と徳島県で木生シダの幹の化石が産出している。前者は *Cyathocaulis nakdongensis* Ogura, 後者も不完全ながら同種とされる (小倉 東大理紀要, 1927 及び, 植研 1950)。また千葉県銚子の下部白亜紀からも同種の報告がある (西田 植物学輯報, 1962)。これらの分布からみて山中地溝帯にも木生シダの産出が期待されていたが、1976年12月、田中邦幸が群馬県多野郡中里村瀬林付近の沢で下部白亜紀の頁岩 (瀬林層) に埋もれた径 24×15 cm の根茎を発見した。付近からさらに数個が転石でみつかった。これらの標本は比較的保存が良く、根茎表面の毛、中心柱の形態、各組織の特徴が観察され、*C. nakdongensis* と同定された。また、根茎の連続切片から、この種が葉跡の背軸側から不定芽を出すことがあらたに明らかになった。*Cyathocaulis* には4種が知られ、うち *C. nakdongensis* は最も広く分布し、韓国にも知られるが、今回の発見で同種の四万十層群に沿った分布が明白になった。ただ銚子産の同種は別種である疑いがあり、現在検討中である。

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